

Amendment to the Claims:

1. (Currently Amended) A laser scanning microscope comprising:
a dispersion element operable to spatially disperse an object light coming from an object under study;
at least one selectively switchable micro-mirror arrangement in a detection beam path which is used for the wavelength selection of the spatially dispersed object light wherein the selected wavelengths that have been spatially dispersed by the dispersion element ~~are received by impinge upon a detector as dispersed light.~~
2. (Currently amended) A combination comprising:
at least one micro-mirror arrangement with at least one dispersion element for wavelength-selective coupling in of illumination light in the direction of the object and wavelength-selective coupling out of object light in the direction of detection in a microscope, wherein ~~a detector receives~~ the selected wavelengths as dispersed by the dispersion element impinge upon a detector as dispersed light.
3. (Original) A method of using the combination as in claim 2 comprising the step of using said combination in a laser scanning microscope.
4. (Previously presented) An arrangement according to claim 1 wherein the dispersion element includes at least one of a grating and prism.

Claims 5-6 (Cancelled).

7 (Withdrawn) An optical connection of an arrangement according to claim 1, the detection beam path comprising dichroic beam splitters for splitting the detection beam path into individual channels.

8. (Withdrawn) The arrangement according to claim 7, wherein the optical connection is carried out via light-conducting fibers.

9. (Withdrawn) In a laser scanning microscope with slit-shaped scanning in at least one direction comprising:

at least one switchable micro-mirror arrangement; and
means for switching said at least one switchable micro-mirror arrangement to provide said slit-shaped scanning.

Claim 10 (Cancelled).

11. (Currently amended) A microscope arrangement with a switchable mirror array comprising:

a detector pinhole operable to receive a detection beam coming from a sample under study;
a dispersion element operable to spatially disperse the detection beam;
a switchable mirror arrangement operable to switch selected wavelengths of the spatially dispersed detection beam;
a focusing element operable to focus the selected wavelengths; and
a detector operable to receive as dispersed light the focused wavelengths that have been selected by the switchable mirror arrangement and spatially dispersed by the dispersion element.

12. (Previously presented) The microscope arrangement according to claim 11 wherein the pinhole includes a second switchable mirror arrangement operable to adjust the size of the entrance aperture.

13. (Currently amended) A microscope arrangement with a switchable mirror array, comprising:

a light source operable to produce a laser light;
a dispersion element;
a switchable mirror array, the dispersion element and the switchable mirror array being disposed in the beam path of the laser light;

wherein:

the dispersion element and the switchable mirror array act together to couple in selected wavelengths of the laser light toward a sample under study; and

a detection beam coming from the sample is dispersed by the dispersion element and the switchable mirror array couples in selected wavelengths of the dispersed detection beam for receipt by a detector, ~~the detector receiving~~ the selected wavelengths as dispersed by the dispersion element impinging upon the detector as dispersed light.

14. (Previously presented) The microscope arrangement according to claim 13 wherein the dispersion element includes a fixed grating or a prism.

15. (Previously presented) The microscope arrangement according to claim 13, further comprising a pinhole adapted to receive the coupled in selected wavelengths of the laser light.